

Exhibit O

March 31, 1959

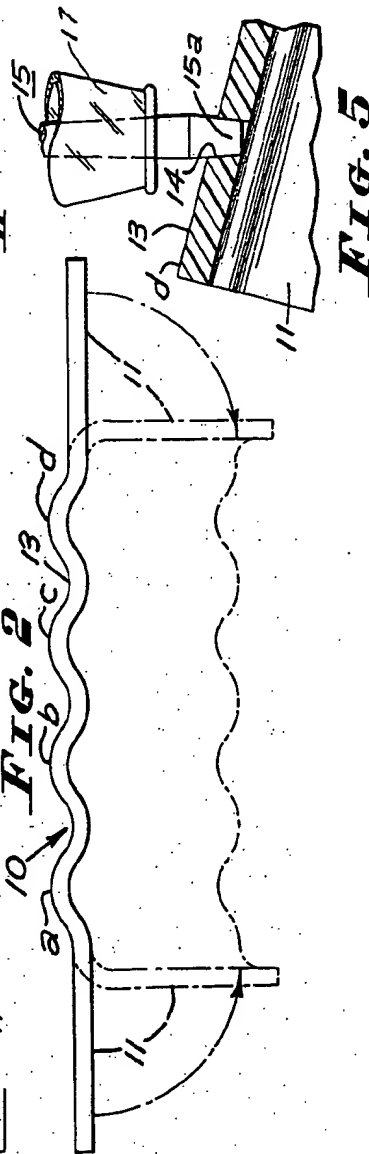
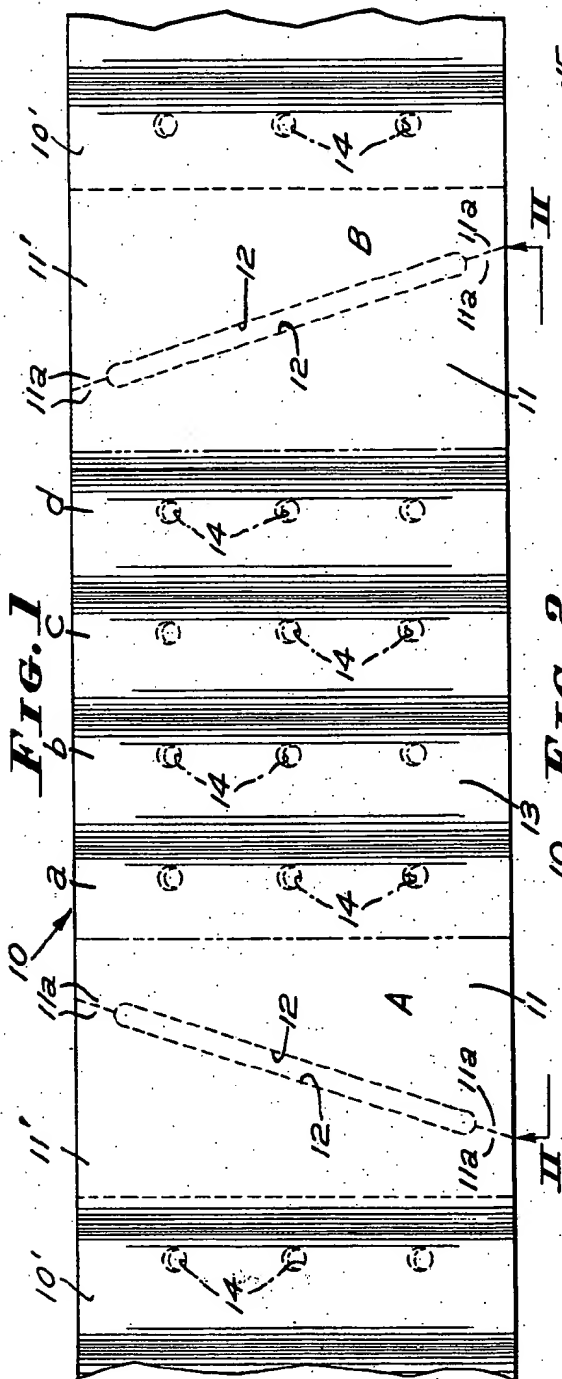
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2,879,900

BOTTLE DRYING RACK

Filed Jan. 9, 1956

2 Sheets-Sheet 1



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FIG. 3

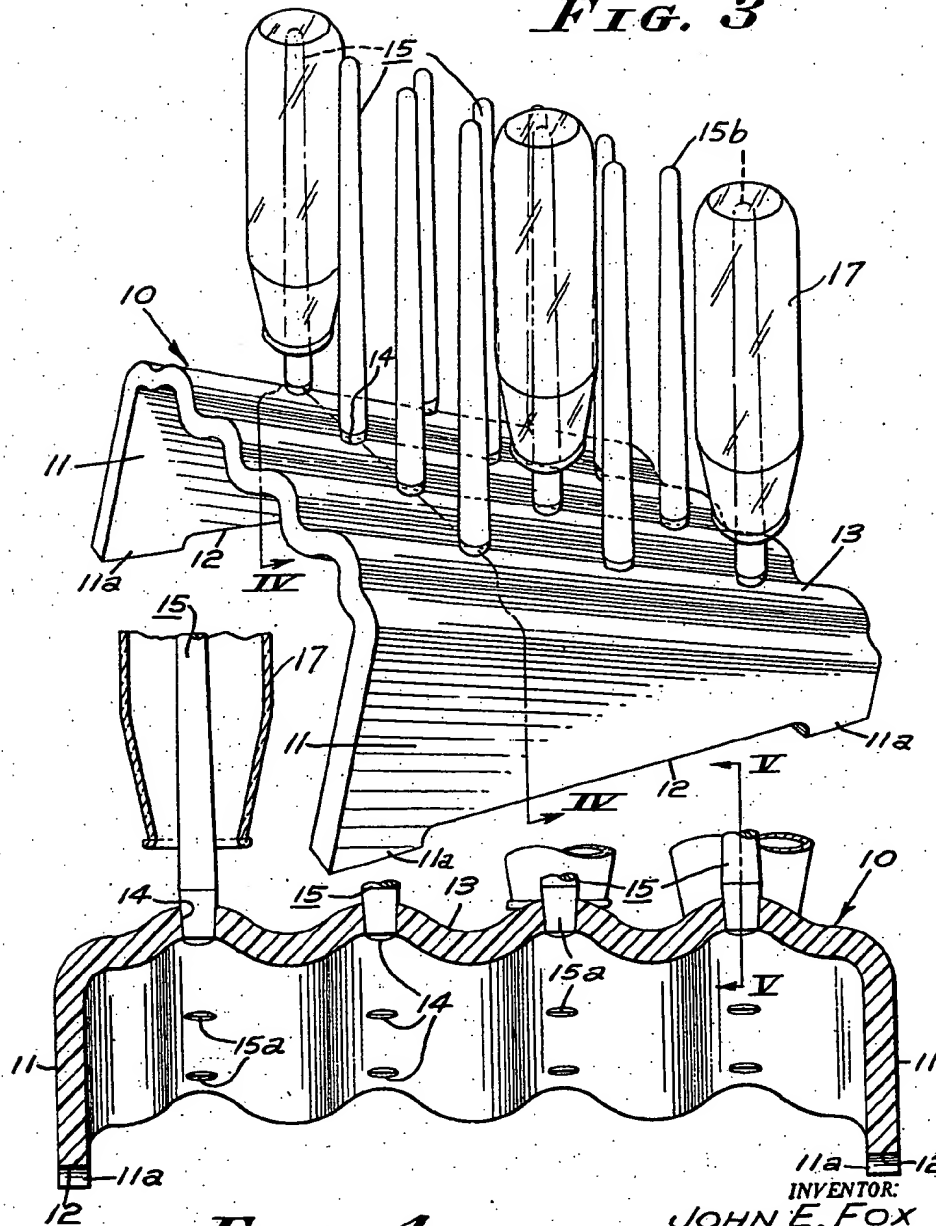


FIG. 4

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BOTTLE DRYING RACK

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2 Claims. (Cl. 211-74)

This invention relates to a drain and dryer support, holder construction or unit for processing hollow articles, such as baby bottles and the like. Particularly, it relates to a drain-dryer device to carry, support or position washed articles in an upside-down relation thereon in such a manner as to avoid their contamination and to insure maximum drying efficiency.

I have found that there is a need for a simple and practical device or unit on which washed and sterilized articles, such as drinking glasses, bottles and particularly, babies' milk bottles, may be positioned and supported until the washing liquid has drained off, the article has dried, and it is ready for use. Although various pan and rack arrangements have been tried, I have found that none of them has fulfilled the need and stood the test of full acceptance by those having handling requirements, such as above-outlined.

In studying the problem involved, I found that the device or unit, itself should be capable of being readily washed, sterilized and dried and of effectively furthering the draining-away of liquid from the region of the articles supported thereon. In addition, each article should be supported or held in such a manner that it is, in effect, suspended independently of other articles and in a spaced relationship with adjacent articles and with the device.

An important factor is that the open mouth portion of the article should be unconfined and suspended out of contact with surface portions of the unit and its wall portions should be suspended somewhat loosely and in a spaced relationship to supporting means employed by the unit. Another factor is that the device should have stability as to its supporting function and not have a tendency to tip over when it is partially or fully loaded.

It has thus been an object of my invention to devise a foolproof, fully practical and sanitary, as well as an effective drain and dryer unit, device or construction which will meet the problem presented;

Another object has been to devise a new and improved form of drain-dryer device or construction on which the articles are positioned on an inclined drainage plane, in a spaced relationship with respect to each other, and out of contact with and above drainage surfaces;

A further object of my invention has been to devise a drain-dryer construction or unit which has its holding or supporting means mounted on offset or raised, backwardly-declining ridges that lie on a common, upper-level drainage plane, and which also has backwardly-declining valleys or depressed portions therebetween that lie on a lower drainage plane;

These and many other objects of my invention will appear to those skilled in the art from the drawings and the description of the hereinafter illustrated embodiment thereof.

In the drawings, Figure 1 is a top plan view showing a longitudinal length of material that may be utilized in accordance with my invention to provide drain-dryer units constructed in accordance with my invention and such as illustrated in Figures 2 and 3;

Figure 2 is a front end view in elevation showing a fabricated piece as cut out from the length of Figure 1; the dot and dash lines show how such a piece is bent or deformed at its ends to form supporting side walls and a top wall for the construction; this view is on the same scale as Figure 1;

Figure 3 is a perspective view in elevation taken along a side and front end of a unit or device devised in accordance with my invention, showing its holders and how articles such as baby bottles are positioned thereon;

Figure 4 is an end section in elevation on an enlarged scale with respect to Figure 3 and taken along the line IV-IV of such figure;

And, Figure 5 is a side sectional detail substantially on the scale of Figure 4 and taken along the line V-V of Figure 4.

In accordance with my invention, I have provided a unit or device which is of substantially unitary or one-piece construction and which is shaped as a stand or raised platform having supporting and tunnel-defining inclined side walls, opposed open end portions, and a table or supporting-top surface or wall that declines towards one of the end portions, such as the back portion of Figure 3. In addition, the top or table wall is provided with a series of adjacent and spaced-apart offset ridges on a common upper plane which declines in the same direction as a lower plane that represents declining valleys therebetween. The somewhat thick section of the top wall thus corresponds to a corrugated member to both strengthen it and provide a desired type of positioning and fluid-flow arrangement.

The body of the device of my construction has no dirt-hiding or unsanitary corners, portions of abrupt dimensional change or closed-in portions. Its main or top drain surface is divided into upper and lower drain planes and limited cross-draining areas or surfaces from each of a series of upper drain ridges or surfaces into adjacent, lower drain valleys or surfaces.

Upright and diametrically or radially spaced-apart article holders, elements or pins are securely mounted on the upwardly-offset or raised surfaces or areas and in a spaced relation therealong to support articles in an upside-down relation thereon and drain them. The holders are of a type that may be easily cleaned and may be removed, reinserted or replaced for cleaning, sterilizing and other purposes. The mounting portions for the holders support them in a substantially vertical-upright position on an end-declining plane of the top wall, so that the holders are at substantially right angles to the supporting surface on which side walls of the device are positioned, e.g., a sink or wash bowl. The holders have other than a right angular or perpendicular relationship with respect to the inclined drain surfaces of the device.

In Figures 1 and 2, I have illustrated a method of making the device of my invention by employing a single length of material which may be of glass, plastic or metal. As shown in Figure 1, the length may be patterned or laid out into a series of adjacent, end-to-end located pattern pieces, sectors or parts 10, 10', etc., and then stamped or cut-out along dotted lines 11a and 12. Each segment, such as the central segment 10 of Figure 1, is then formed into a stand, as shown in Figure 2, by bending-down its side wall portions 11 to the dot and dash position illustrated. If glass or plastic material is used, the piece is of course heated for such an operation.

I prefer to punch, form or drill-out mounting hole portions 14 in the sector 10 while it is in the unitary and flat length form of Figure 1. It will be noted that the mounting hole portions 14 are in a spaced relationship along ridge portions a, b, c and d which represent upwardly-offset surface areas of the holder or device. As shown in Figure 5, the upper areas decline towards

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one end of the device and between adjacent like portions to define valleys therebetween. The upper surface, table, top or platform portion 13 thus has a somewhat corrugated structure that declines endwise in the direction of declination of the side walls or portions 11.

From Figures 4 and 5, it will be apparent that the mounting hole portions 14 are of inwardly or downwardly converging cone-shape to receive like-shaped tip-end portions 15a of upright holders or elements 15. The elements 15 may also be of metal or plastic material and preferably, of a somewhat soft cushioning and insulating type of material, such as wood. The elements 15 are driven or wedged into the hole portions 14 at their lower ends 15a, to project upright at substantially right angles to the supporting surface for the device, as shown in Figure 3. The holders or elements 15 receive articles, such as baby bottles on their rounded upper end portions 15b. Figure 5 indicates that the hole portions 14 are drilled at an angle with respect to the declination of the top wall or portion 13 and immediately, with respect to the ridge or upwardly-offset surface portions a, b, c and d. In Figure 5, the surface d represents the surfaces a, b, c and d.

As clearly shown in Figure 3, the mounting or hole portions 14 provide a positioning for the pins 15 such that they and particularly the pins, extend substantially vertically to define an acute angle with the upper end portion of the declining or sloped top wall 13 (to the left of Figure 3) and an obtuse angle with the lower end portion of such top wall (to the right of Figure 3). Thus, the mounting holes 14 and particularly the pins, elements or spindles 15, are positioned to project upwardly perpendicular or at right angles to the plane of bottom support of the unit or device, as provided by the side walls 11.

The bottom edges of the side walls 11 may be centrally upwardly-offset or cut-out, as shown at 12, to provide under-drainage and limit the support of the device to feet portions 11a that are located at four corners of the device. I have found that it is highly important for more effective draining of the articles such as the milk bottles of Figures 3, 4 and 5, that they not only be supported or held in a substantially vertical-upright position, as distinguished from an inclined upright position, but also that they have a diametrically or radially-spaced relationship with each other. This permits a certain amount of leeway of end-mounting of the articles on the elements 15, but at the same time enables adjacent articles 17 to be positioned with air-spacing between their opposed surfaces.

The drain-dryer device shown in Figure 3 is adapted to be positioned on a sink or sink board, for example. To provide functional stability of the device, it is important

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that the pin-like mounting elements 15 be positioned at substantially right angles to the plane of support provided by the side walls 11 or their feet 11a and not at right angles to declining plane defined by the top wall 13.

What I claim is:

1. A drain-dryer device of improved sanitary characteristics for use in drying a group of hollow articles such as bottles in an inverted spaced-apart relation which comprises, an integral one-piece stand body of thick section having an endwise-forwardly-declining top wall that slopes downwardly along its opposite sides into a pair of upright side supporting walls, said top wall having a substantially corrugated and smoothly-rounded top section with rounded ridges and valleys extending in the direction of its forward declination, a series of mounting hole portions in a spaced relationship along said ridge portions, pin-like support elements mounted within said hole portions to project upwardly therefrom substantially perpendicular with respect to a plane of support defined by bottom edges of said side walls, said pin elements having a radially spaced-apart relationship with each other at least slightly greater than the maximum diameter of articles to be supported thereon and having a length greater than the maximum length of said articles, so as to support the articles in a spaced-apart relationship with respect to each other and with respect to said top wall, and said top wall having valleys along its opposite sides that provide the downward slope into said side walls to provide free run-off transversely as well as longitudinally thereof.

2. A device as defined in claim 1 wherein said hole portions are of cone-shape and extend through the thickness of said ridge portions, lower ends of said pin-like elements are also of cone-shape and are adapted to fit within said cone-shape hole portions in wedging engagement therewith to project upwardly therefrom, a vertical central axis of said hole portions defining an acute angle with respect to an upper portion of said top wall and an obtuse angle with respect to the lower portion thereof, and said side supporting walls have substantially planar surfaces and centrally cut-out portions along their bottom edges to define flushing areas and end feet for said body.

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